

Claims

1. A method (800) for improving a quality of a scalable video object plane enhancement layer transmission over an error-prone network, the enhancement layer transmission including at least one re-synchronisation marker followed by a Video Packet Header and header extensions, the method comprising the steps of:
- replicating a reference VOPs' identifier from a video object plane header into a number of enhancement layer header extensions (715);
- recovering (830, 840, 850, 860) from an error corrupting said reference VOPs' identifier by decoding a correct reference VOPs' identifier from subsequent enhancement layer header extensions; and
- identifying (870, 880) correct reference video object planes to be used in a reconstruction of an enhancement layer video object plane in the scalable video transmission;
- wherein the scalable video object plane enhancement layer transmission is an MPEG-4 scalable video object plane enhancement layer transmission, or similar, and the reference VOP's identifier is a 'ref\_select\_code' field (715).
2. The method for improving a quality of a scalable video object plane enhancement layer transmission over an error-prone network according to Claim 1, wherein the step of recovering includes the steps of:
- estimating (830) a reference VOPs' identifier when an error has occurred in the reference VOPs' identifier;

decoding (840) the video object plane enhancement layer transmission until a video object plane enhancement layer header extensions is decoded; and

correcting (850) said estimated reference VOPs' identifier in response to a reference VOPs' identifier extracted from said decoded header extensions.

3. The method for improving a quality of a scalable video object plane enhancement layer transmission over an error-prone network according to Claim 1, wherein the step of recovering includes the steps of:

buffering (860) video object plane enhancement layer transmission bits, until a video object plane enhancement layer header extensions is decoded, when an error has occurred in the reference VOPs' identifier; and

correcting (870) said reference VOP's identifier in response to a reference VOPs' identifier extracted from said decoded header extensions.

20 4. The method for improving a quality of a scalable video object plane enhancement layer transmission over an error-prone network according to Claim 1, further comprising the step of:

selecting (870, 880) a correct reference VOP's identifier to decode subsequent enhancement layer transmissions.

5. A video communication system (600) comprising:

a video encoder (615) comprising:

a processor for encoding a scalable video sequence having  
5 a plurality of enhancement layers, wherein the enhancement  
layer transmission includes at least one re-  
synchronisation marker followed by Video Packet Header and  
header extensions;

replicating means for replicating a reference  
10 VOP's identifier from a video object plane header into a  
number of enhancement layer header extensions (715); and  
a transmitter for transmitting said scalable video  
sequence containing said one or more reference VOPs'  
identifier; and

15 a video decoder (625) comprising:

a receiver for receiving said scalable video  
sequence containing said video object plane enhancement  
layer header extensions (715) from said video encoder;

20 a detector detecting one or more errors in said  
reference VOP's identifier in an enhancement layer of said  
received scalable video sequence; and

a processor operably coupled to said detector for  
recovering (830, 840, 850, 860) from an error corrupting  
25 said reference VOPs' identifier by decoding a correct  
reference VOP's identifier from subsequent enhancement  
layer header extensions when said one or more errors is  
detected, and identifying (870, 880) correct reference  
video object planes to be used in a reconstruction of an  
30 enhancement layer video object plane in the scalable video  
transmission;

wherein the scalable video object plane enhancement layer transmission is an MPEG-4 scalable video object plane enhancement layer transmission, or similar, and the reference VOPs' identifier is a 'ref\_select\_code' field  
5 (715).

6. A video communication unit (615, 625) adapted for use in the method of any of claims 1 to 4 or adapted for use in the communication system of claim 5.

10

7. A video encoder (615) adapted for use in the method of any of claims 1 to 4 or adapted for use in the communication system of claim 5.

15 8. A video decoder (625) adapted for use in the method of any of claims 1 to 4 or adapted for use in the communication system of claim 5.

9. A mobile radio device comprising a video  
20 communication unit in accordance with claim 6 or a video encoder in accordance with claim 7 or a video decoder in accordance with claim 8.

10. A mobile radio device according to claim 9, wherein  
25 the mobile radio device is a mobile phone, a portable or mobile PMR radio, a personal digital assistant, a lap-top computer or a wirelessly networked PC.

**This Page is Inserted by IFW Indexing and Scanning  
Operations and is not part of the Official Record**

**BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ BLACK BORDERS
- ☐ IMAGE CUT OFF AT TOP, BOTTOM OR SIDES
- ☐ FADED TEXT OR DRAWING
- ☐ BLURRED OR ILLEGIBLE TEXT OR DRAWING
- ☐ SKEWED/SLANTED IMAGES
- ☐ COLOR OR BLACK AND WHITE PHOTOGRAPHS
- ☐ GRAY SCALE DOCUMENTS
- ☒ LINES OR MARKS ON ORIGINAL DOCUMENT
- ☐ REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY
- ☐ OTHER: \_\_\_\_\_

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.**